REMARKS

Claims 1-3 and 5-9 are pending. Claims 6-8 have been withdrawn from consideration.

Applicants' Response to Claim Rejections under 35 U.S.C. §103(a)

Claims 2 and 3 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Yamada et al. ("Yamada") JP 11-54759 in view of Kunitomo et al. ("Kunitomo") JP 5-343681. Specifically, the Office Action maintains that Yamada does not disclose the limitation in current claim 2 of the present invention, such that "said first insulating film abutting against one end of a gate electrode and extending in a direction perpendicular to said gate electrode along an interface between a first conductivity type body contact region and a second conductivity type source and drain regions." However, the Office Action asserts that an insulating film consisting of SiO_2 film 12 and the oxide film 30 disclosed in Kunitomo corresponds to the above limitation. Kunitomo is directed to a "longitudinal ultra thin film transistor", while Yamada is directed to a "transistor with a long and thin gate electrode 5 above a thin semiconductor film." Applicants respectfully request reconsideration based on the following remarks.

Applicants respectfully submit that it is not reasonable to combine Yamada with Kunitomo which is a different type transistor. There must be a teaching or suggestion in the art to make the combination which results in the claimed invention. In the present instance, applicants respectfully submit that there is no such teaching. The Office Action states that one would be motivated by the desire to obtain "excellent switching characteristics" as taught by Kunitomo.

Kunitomo does not teach or suggest that the excellent switching characteristics are obtained alone by the insulating film abutting against one end of a gate electrode and extending perpendicular thereto. Kunitomo is directed to a "longitudinal ultra thin film transistor." This is specific to a transistor formed as a protrusion 20 in a substrate. However, Yamada is directed to a transistor with a long and thin gate electrode 5 above a thin semiconductor film. The advantage of Yamada is in the elongated, thin gate electrode to eliminate parasitic capacitance and improve switching.

One skilled in the art could not readily envision a combination of Yamada and Kunitomo which results in the benefits from both inventions. Further, there is no apparent teaching in Kunitomo that the silicon dioxide film's 12 thickness results in the improved characteristics, as suggested by the Office Action.

Further, Yamada relates to an insulated gate type semiconductor device comprised of a semiconductor layer serving as an active region isolated from a semiconductor substrate 1 (corresponding to 11 in the present invention) by a substrate isolation insulating film 2 (corresponding to 12 in the present invention), while Kunitomo does not relate to such an insulated gate type semiconductor device.

The Office Action states that the oxide film 30 in Kunitomo correspond to the above substrate isolation insulating film ("the substrate isolation insulating film 30"). *See* page 5, line 3 of the Office Action. However, the above oxide film 30 is not a film for isolating a semiconductor layer serving as an active region from a semiconductor substrate, as in the substrate isolation insulating film 12 of the present invention.

In addition, applicants respectfully submit that Kunitorno does not disclose the limitation defined in current claim 2 of the present invention, such that "said first insulating film abutting against the one end of said gate electrode and extending in a direction perpendicular to said gate electrode along said interface between a first conductivity type body contact region for draining carriers stored at a channel region under a gate electrode, and a second conductivity type source and drain regions", in view of the following points (i) and (ii):

(i) According to the present invention, the above first insulating film (18) is arranged to abut against one end of a gate electrode (20), a shown by "X" in the attached Fig. 8(d).

In contrast, the insulating film consisting of both SiO_2 film 12 and the oxide film 30 in Kunitomo, which insulating film is relied on for the limitation by the Office Action, is formed directly under a gate electrode 32. Therefore, the above insulating film consisting of both SiO_2 film 12 and the oxide film 30 in Kunitomo corresponds to the second insulating film (17) in the present invention, and does not correspond to the first insulating film (18) having greater thickness than the second insulating film.

(ii) Kunitomo does not include a body contact region (30) as shown in the present invention. Therefore, it is not disclosed in Kunitomo, to extend the first insulating film (18) in a direction perpendicular to the gate electrode (20), as indicated by "Z" in the attached Fig. 8(d), along an interface between the body contact region (30) and source and drain regions (25, 26), as indicated by "Y" in the attached Fig. 8(d).

In other words, the insulating film consisting of both SiO_2 film 12 and the oxide film 30 in Kunitomo is formed directly under the gate electrode 32 and on the upper end part of a

protrusion 20 formed on the substrate 1. Consequently, the above insulating film in Kunitomo corresponds to the second insulating film (17) in the present invention, serving as a gate insulating film existing directly under the gate electrode, and does not correspond to the first insulating film (18) in the present invention. Applicants respectfully submit that Kunitomo does not disclose the limitation as defined in current claim 2 of the present invention.

Wherefore, applicants respectfully submit that the invention of claims 2 and 3 are not obvious in light of Yamada and Kunitomo, because there is no teaching suggestion or motivation which would lead to the combination of the references, and Kunitomo does not disclose the limitation for which it is asserted in the Office Action.

In view of the accompanying remarks, Applicants submit that the claims are in condition for allowance. Applicants request such action at an early date.

If the Examiner believes that this application is not now in condition for allowance, the Examiner is requested to contact Applicants' undersigned attorney to arrange for an interview to expedite the disposition of this case.

If this paper is not timely filed, Applicants respectfully petition for an appropriate extension of time. The fees for such an extension or any other fees that may be due with respect to this paper may be charged to Deposit Account No. 50-2866.

Respectfully submitted,

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Enclosure: Fig. 8(d)